

Appl. No. 10/682,413
Amdt. dated 01/06/2006
Reply to Office Action of 10/06/2005

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REMARKS

Claims 1 - 24 are pending. In this Office Action, the Examiner rejected Claims 9 - 16 under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Claims 1, 9 and 17 were rejected under 35 U.S.C. §102(a) as being anticipated by Riedle. Claims 2 - 8, 10 - 16 and 16 - 24 were rejected under 35 U.S.C. §103 as being unpatentable over Riedle in view of well-known features of which Official Notice is hereby taken.

In response to the 112 rejection to Claims 9 - 16, Applicants have amended Claims 9, 13 and 14 to replace "code means" with instruction code. Applicants believe that, by this amendment, the 112 rejection has been cured. For the reasons stated more fully below, Applicants submit that the claims are allowable over the applied reference. Hence, reconsideration, allowance and passage to issue are respectfully requested.

As mentioned in the SPECIFICATION, in the past, when mirrors in which data is stored were busy and requests for different pieces of data were received, the logical volume manager (LVM) would send one request to the first mirror to have become busy. The other two requests might have been sent to one of the other two mirrors or the two requests might have been sent each to one of the other two mirrors. The present invention, however, may chain together all the requests and have the mirror which has serviced the least number of read requests service the chained requests. To do so, however, the requests may have to be for data that

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falls within a user-configurable input/output (I/O) threshold test the mirror servicing the chained requests becomes too overburdened.

Thus, according to the teachings of the invention, when read requests are received, it is determined whether the amount of data requested by the read requests is within a user-configurable threshold. If so, the read requests are chained together and the chained requests are sent to one (i.e., a common) mirror to be serviced.

The step of ascertaining that the amount of data falls within a user-configurable threshold ensures that the mirror servicing the chained requests does not become too overburdened. Thus, if the amount of data to be read is within the user-configurable threshold (e.g., 10 megabytes), the least used mirror may be used to service the chained requests; otherwise, the requests may not be chained together and more than one mirror may be used to service the requests.

The invention is set forth in claims of varying scopes of which Claim 1 is illustrative.

1. A method of servicing a plurality of read requests using a common mirror comprising the steps of:

determining whether the amount of data requested by the read requests is within a user-configurable threshold;

chaining the read requests together if the amount of data requested by the read requests is within the user-configurable threshold; and

sending the chained requests to the common mirror for servicing. (Emphasis added.)

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The Examiner rejected the claims under 35 U.S.C §102(a) as being anticipated by Riedle. Applicants respectfully disagree.

Riedle teaches a method for accessing pages in a redundant direct access storage array. In this case, accesses to pages in a multi-page request are grouped into single commands for each contiguous grouping of pages on each drive. Before adding a request for a page of data to an existing command, it is first determined whether or not the requested page is contiguous to a page that has already been added to the command. If so, the request is added to the command. Thus, so long as the pages that are being accessed are contiguous to each other, presumably one mirror will be used to service the requests regardless of the amount of data being requested.

Therefore, Riedle does not teach the step of **determining whether the amount of data requested by the read requests is within a user-configurable threshold** in order to decide whether the requests are to be chained together.

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Hence, Claim 1, along with its dependent claims, is allowable. The other independent claims (i.e., Claims 5, 9, 13, 17 and 21), and their dependent claims, which all incorporate the emboldened-italicized limitations in the above-reproduced Claim 1, should also be allowable. Consequently, Applicants once more request reconsideration, allowance and passage to issue of the claims in the application.

Respectfully Submitted

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